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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/647,546	11/29/2000	Bernard Feurer	BIF103839	8013

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YOUNG & THOMPSON
745 SOUTH 23RD STREET 2ND FLOOR
ARLINGTON, VA 22202

EXAMINER

SCHWARTZ, JORDAN MARC

ART UNIT	PAPER NUMBER
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2873

DATE MAILED: 05/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/647,546

Applicant(s)

FEURER ET AL.

Examiner

Jordan M. Schwartz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3, 4, 7 and 12-18 is/are rejected.
- 7) ☒ Claim(s) 5, 6 and 8-11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 February 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 3-4, 7, 12-14 and 17-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Smith.

Smith reads on these claims by disclosing the limitations therein including the following: an ophthalmic lens (abstract) comprising a material having a refractive index varying in a least one direction (column 1, lines 55-68, column 3, lines 7-25); in response to a force being exerted directly on the material by ocular tissue, for causing the refractive index to change (column 1, lines 55-68, column 3, lines 7-25). Smith further discloses the material comprising at least one polymer (column 5, line 21); the material as a silicon or methacrylate monomer (column 5, line 26); the material comprising portions capable of being oriented by means of a mechanical effect (column 1, lines 55-68, column 3, lines 7-25 in that the bending of the material which is a “mechanical effect” will cause the lens surface to change its orientation); the refractive index changes due to a force exerted by a muscle of the eye, zonulae, or ocular tissue (column 1, lines 55-68); and the lens as an intraocular lens (abstract).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith.

In reference to claims 15-16, Smith discloses as is set forth above and discloses the lens as an intraocular lens with the refractive index changing due to muscles in the eye and not a contact lens with the refractive index changing due to the eyelid.

However, Smith teaches that the same materials used in contact lenses can be used for the claimed intraocular lenses (column 5, lines 21-39). Furthermore, it is well known in the art of lenses that the same optical principals applicable for intraocular lenses are also applicable for contact lenses. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the lens of Smith to function as a contact lens with the refractive index changing due to the eyelid since Smith teaches of intraocular lens with the refractive index changing due to muscles in the eye, that the same material used in contact lenses can be used for the intraocular lens, and further since it is well known in the art of lenses that the same optical principals applicable for intraocular lenses are also applicable for contact lenses for the purpose of having a lens provide the required optical correction by sitting on the surface of an eye as a contact lens as opposed to providing the optical correction by being inserted into an eye as an intraocular lens.

Allowable Subject Matter

Claims 5-6 and 8-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: with respect to the allowable subject matter, none of the prior art either alone or in combination disclose or teach of the claimed combination of limitations. Specifically, with respect to claims 5-6, none of the prior art either alone or in combination disclose or teach of the claimed ophthalmic lens device comprising a material having an optical refractive index varying in at least one direction in response to a force being exerted directly on the material by ocular tissue, for causing the refractive index to change, and further wherein the material further comprises at least one polymer onto which is bonded at least one substituent selected from the groups as claimed. Specifically, with respect to claims 8-11, none of the prior art either alone or in combination disclose or teach of the claimed ophthalmic lens device comprising a material having an optical refractive index varying in at least one direction in response to a force being exerted directly on the material by ocular tissue, for causing the refractive index to change, and specifically further wherein the material comprises at least one of a mesomorphic compound, a liquid crystal polymer or a three-dimensional liquid crystal polymer.

Response to Arguments

Applicant's arguments filed February 26, 2003 have been fully considered but, with respect to the Smith reference, they are not persuasive. Specifically, with reference to Smith, applicant argues that the flattening of the lens causes the power of the lens to

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change and leaves the refractive index unchanged. The examiner disagrees. Smith specifically states that the “the lens is readily deformable by the natural capsule or capsular bag so as to change the index of refraction thereof” (column 5, lines 2-4). Smith further states “the anterior and posterior walls thereof are normally biased outwardly in a bulging relation with respect to each other, but which can be flattened or caused to move closer together by the natural capsule that has been left within the eye and also the muscle-acting zonules that nature has provided and which also are left within the eye so that they can exert a tensional pull on the natural capsule with the consequence that an artificial lens can be flattened so as to change the refractive index thereof” (column 1, lines 59-68). Smith further states “More specifically, the zonules, which remain connected to the natural capsule, continue to exert a muscular force in a direction to flatten the intraocular lens so that the refractive index is changed” (column 3, lines 7-14). Smith therefore states in numerous places throughout the specification that it is the refractive index that is changing in response to the force being exerted directly on the material. Applicant further argues that Smith’s use of the term “refractive index” is inappropriate. The examiner further disagrees. Smith repeatedly states that it is the refractive index that is changing as a response to the force being exerted and Smith has not stated “refractive index” merely one time in the specification in an apparent error. Furthermore, Smith is using materials that are the same as those set forth in applicant’s claims such as in claims 4 and 7 and therefore there is no basis to state that Smith is not changing the refractive index as it is stating. Furthermore, although the examiner has used Smith in a 102 rejection above (since it is the

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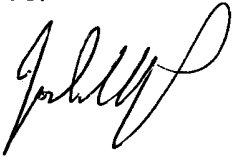
examiner's belief that Smith anticipates the rejected claims), at the very least Smith makes obvious that a force being exerted directly onto the ophthalmic lens material can cause a change in the refractive index. Specifically, in the rejected claims, such as claim 3, applicant is broadly claiming that the refractive index is changing as a result of a force being exerted directly on the material by ocular tissue. Smith (regardless of whether one believes that the term "refractive index" is being used correctly or incorrectly) is exactly stating that this is what their lens is doing. Therefore, at the very least, Smith is making obvious the change in the refractive index due to a force being exerted directly on the material by ocular tissue. Furthermore, applicant, in independent claim 3, is not claiming the lens as comprising any material that differs from those disclosed in Smith in order for Smith to not make obvious what is disclosed in claim 3.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jordan M. Schwartz whose telephone number is (703) 308-1286. The examiner can normally be reached on Monday to Friday (8:00-5:30), alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Y. Epps can be reached at (703) 308-4883. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

A handwritten signature in black ink, appearing to read 'Jordan M. Schwartz', written in a cursive style.

Jordan M. Schwartz
Primary Examiner
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May 8, 2003